

REMARKS

Claims 1-28 are currently pending in this application. Reconsideration is respectfully requested in light of the following remarks.

The Examiner maintains the rejection of claims 1-28 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,370,431 to Stoop et al. Applicant respectfully traverses this rejection.

Applicant's claimed invention as recited in independent claims 1, 13, 17, 23 and 27 is directed toward a method and corresponding apparatus for detecting and preventing ventricular arrhythmias. For example, independent claim 1 recites a method comprised in part by determining a difference between morphologies of at least two PVCs and determining whether to deliver preventive therapy based on a comparison of the difference between morphologies and a threshold. (Underlining added for emphasis only). Applicant respectfully submits that Stoop et al. do not disclose or suggest the recited claim elements.

It is well settled that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference and that the identical invention must be shown in as complete detail as contained in the claim. (see MPEP §2131), Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed Cir. 1987).

Further, to serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled

with extrinsic evidence that makes clear that the missing descriptive matter is necessarily present in the thing described in the reference and that it would be so recognized by persons of ordinary skill in the art. Continental Can Co. USA vs. Monsanto Co. 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

The Examiner suggests that Stoop et al. consider T-wave morphology in performing calculations to determine whether to deliver preventive therapy. The Examiner therefore maintained his original rejection that Stoop et al. disclose using a difference in morphologies to determine whether to deliver preventive therapy since the time derivative curve of T-wave amplitude morphology as taught by Stoop et al. is nonetheless a measure of signal morphology. The Examiner further alleges that although a T-wave follows the first contraction it also precedes any subsequent PVCs, and in this way influences and is related to a PVC. Applicant respectfully disagrees.

Applicant submits that the Examiner provides no teaching that analyzing the QT interval, including the T-wave morphology, as taught by Stoop et al. is in any way identical to determining the difference between the morphology of two PVCs as would be required to anticipate Applicant's claimed invention. In fact Stoop et al. do not disclose or in any way suggest analyzing the morphology of PVCs.

Rather, Stoop et al. disclose a pacemaker system and method for analyzing patient QT information on an ongoing basis, and for determining

the occurrence of statistically significant changes in a plurality of QT parameters, thereby providing an accurate determination of when torsades de pointes (TdP) or other VT is indicated. For example, Stoop et al. compare the current QT interval with a compiled mean value of the QT interval for an appropriate rate, and determine whether the QT interval has increased by more than twice the standard deviation of the mean. In other embodiments Stoop et al. perform similar calculations for QT dispersion and the time derivative of QT changes in T-wave amplitude and morphology. (Stoop et al., col. 2, lines 32-42).

Thus, in some embodiments Stoop et al. compare the morphology of a current T-wave to a compiled mean value of the T-wave. The Examiner provides no indication as to how comparing the morphology of a current T-wave to a stored mean value is equivalent to comparing the morphology of two PVCs as recited in Applicant's claimed invention. In addition, Stoop et al. nowhere disclose or suggest determining the morphology of two PVCs or determining whether to deliver preventive therapy based on a comparison of the difference between morphologies of the two PVCs and a threshold.

Rather, in some embodiments the pacemaker of Stoop et al. determines whether a ventricular extra systole (VES) has occurred, and if so, what has been the recent rate of occurrence of VESs. This data is used to calculate whether pacing at an intervention rate above the patient's natural rate is indicated, and if so how to adjust the intervention rate. (Stoop

et al., col. 2, lines 42-47). Thus Stoop et al analyze the rate of occurrence of PVCs not the morphology difference between PVCs.

Accordingly, Applicant respectfully submits that claims 1, 13, 17, 23 and 27 are novel and unobvious over Stoop et al. and are therefore allowable. Applicant further submits that claims 2-12, claims 14-16, claims 18-22, claims 24-26 and claim 28 that depend from claims 1, 13, 17, 23 and 27 respectively are allowable as are claims 1, 13, 17, 23 and 27 and for additional limitations recited therein.

Accordingly, Applicant respectfully submits that the present application is in condition for allowance.

Pursuant to 37 C.F.R. 1.136(a)(3), Applicant hereby requests and authorizes the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 22-0265.

Respectfully submitted,

Dated: 11-12-06

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